

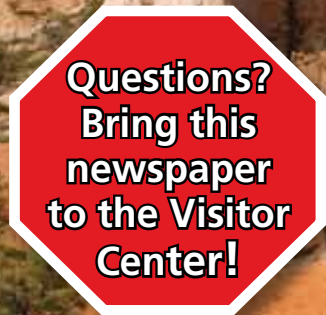
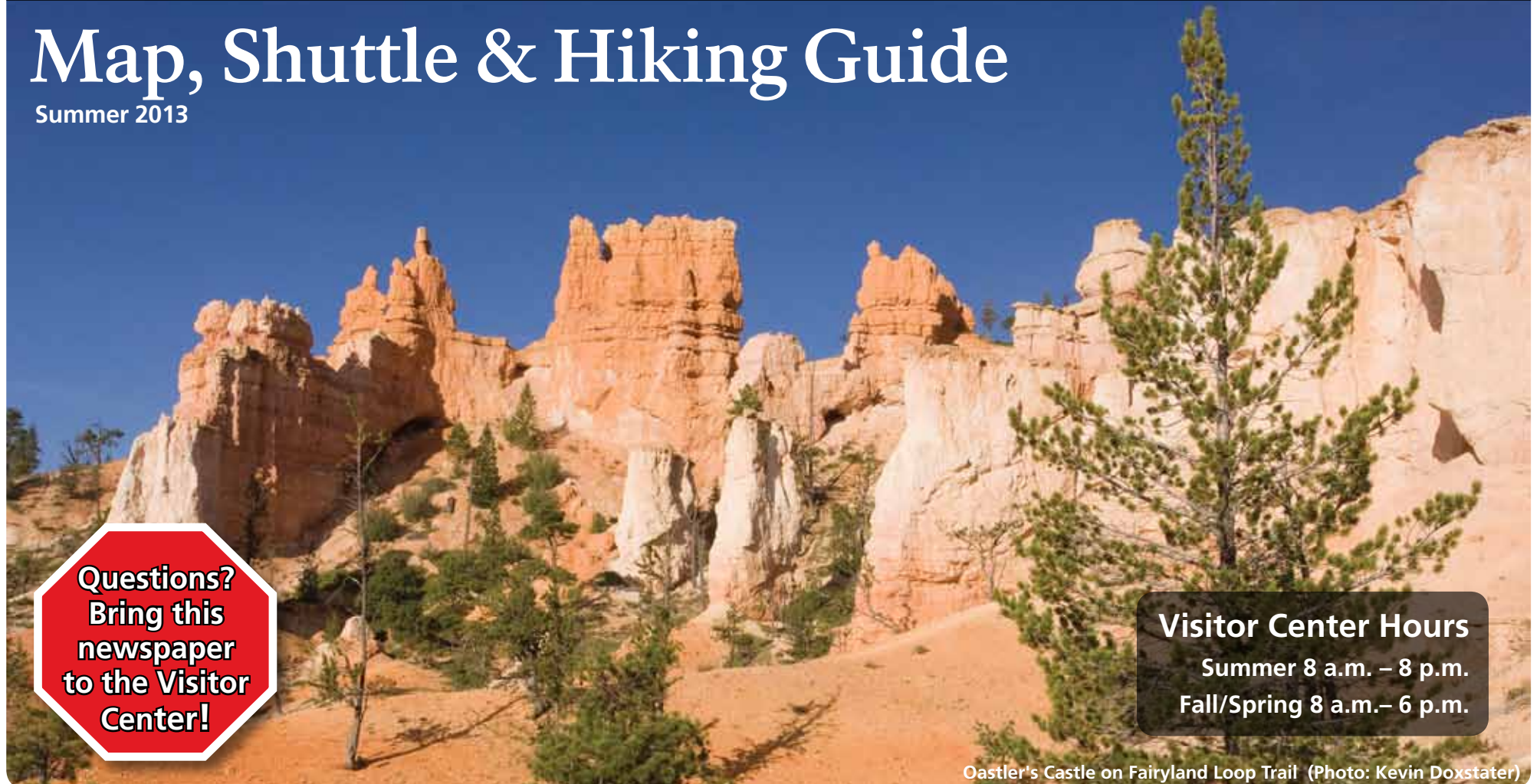
The Hoodoo

National Park Service
U.S. Department of the Interior



Map, Shuttle & Hiking Guide

Summer 2013



Visitor Center Hours
Summer 8 a.m. – 8 p.m.
Fall/Spring 8 a.m.– 6 p.m.

Oastler's Castle on Fairyland Loop Trail (Photo: Kevin Doxstater)

How to Make the Most of Your Time



Less Than 4 Hours

Visitor Center

Stop at the Visitor Center for information, museum exhibits, and a 22-minute award-winning orientation film, shown daily 8:00 a.m. to closing, on the hour and half hour.

Tour of the Overlooks

Between 8 am & 7 pm, ride the shuttle to Bryce, Inspiration, Sunset and Sunrise Points first. If you have more time, use your car to visit overlooks in the southern portion of the park.

Short Walk

Hike a short segment of the Rim Trail or select one of the hikes from the "Easy to Moderate" group in the hiking table on page 7.

More Than 4 Hours

Visitor Center, Shuttle/Auto Tour, Short Walk and Day Hike

Bryce is best experienced from its trails. Select one of the combination loops from the "Moderate" or "Strenuous" groups in the hiking table on page 7.

Ranger Program

Attend a free Ranger Program to learn more about the natural and cultural history of this region. Check at the Visitor Center for the current program schedule.

Horseback Ride

Take a horse ride into Bryce Canyon. Wranglers lead 2-hour and half-day rides daily. Inquire at Bryce Canyon Lodge.

Auto Tour

Where is the best overlook?

There are 14 viewpoints along Bryce Canyon's 18-mile scenic drive (one-way distance) and everybody determines his or her favorite for a multitude of reasons. For every 15 minutes you extend your visit, you can see another overlook! If you stop at all the viewpoints, it could take as little as 3-4 hours.

Our most famous views are found in Bryce Amphitheater, including Sunrise, Sunset, Inspiration and Bryce points. The southern overlooks feature beautiful,

though smaller, amphitheaters and/or long-distance, panoramic views across the Grand Staircase-Escalante National Monument. From many of the park's overlooks you can see over 100 miles (160 km) on a clear day!

Since all the viewpoints are on the left side of the road as you drive south towards Rainbow Point, we recommend stopping at the viewpoints as you drive north on your return trip. This way, each stop will be an easier and safer right turn.

What's Inside

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Safety at Bryce Canyon

How many people die at Bryce? Fortunately, Bryce averages less than 1 fatality per year. In order of decreasing abundance, fatalities are caused by:

- Heart attacks
- Falling off cliffs
- Lightning
- Vehicle accidents

Unfortunately, hundreds of serious injuries have also needlessly occurred, often from ignoring park safety warnings.

Top 10 Causes of Bryce Injuries

#10 Unsafe Driving

- Speeding (posted limits are 15 to 45 mph).
- Failure to wear seat belts.
- Passing on a double yellow line.
- Auto vs. animal. Watch for Wildlife!
- Rear-ending. Stop in pullouts, never in road.
- Not reducing speed on wet or icy roads.

#9 Climbing / Sliding down cliffs

The rock at Bryce forms crumbly cliffs and steep gravelly slopes. Hand and toe holds support nothing heavier than chipmunks. Climbing the rocks and sliding on the slopes is illegal and dangerous.

#8 Feeding Animals

Fed animals become aggressive. Even small animals can inflict bites requiring stitches and worse yet transmit disease. Watch wildlife from a distance and discourage animals that approach you.

#7 Ignoring Extreme Weather

At Bryce it is possible for the difference between the daily high and low to be as much as 50° F / 27° C! Lightning is a year-round danger -- especially during summer storms! Seek the shelter of a building or your vehicle whenever the "flash-bang interval" (time between lightning and thunder) is less than 30 seconds.

#6 Dehydration

Drink 1 quart / liter every 1-2 hours. A well hydrated body is better able to regulate body temperature and is more resistant to heat exhaustion. Sunburns also lead to dehydration. Wear a hat, sunscreen, and sunglasses to protect from the sun overhead and reflected UV light.

#5 Leaving the Trail

Stay on designated trails and away from cliff edges where footing can be tricky. Even on seemingly gentle slopes, it can be impossible to keep your footing. Bring the maps on page 6 and 7 to avoid getting lost.

#4 Over-exertion

Park elevations reach 9115 ft (2778 m) subjecting you to 70% of the oxygen you might be used to. Bryce's trails start at the top which means all returns will be uphill. Turn back BEFORE you become tired. Know and respect your own physical limitations.

#3, #2, & #1 Bad Choice of Footwear

Wear hiking boots with good ankle support and "lug" traction. Hiking without hiking boots is like SCUBA diving without an air tank. Sport-sandals & "trainers," are NOT safe hiking footwear.

Emergencies Call **911 or 435-676-2411**

24-hours a day or contact a Park Ranger

Park Headquarters

435 834-5322

Fax 435 834-4703

Lost & Found: 435 834-4736

Mailing Address

PO Box 640201

Bryce, Utah 84764-0201

Web

Website: www.nps.gov/brca

Twitter: [brycecanyonNPS](https://twitter.com/brycecanyonNPS)

Facebook: facebook.com/BryceCanyonnps

National Park Service
U.S. Department of the Interior



Travelers Information Stations: Tune radio to 1590 and 1610 AM for park and shuttle information

Information and Services



Visitor Center

In summer, open daily 8:00 am - 8:00 pm. Information, museum, publications, an award-winning film, backcountry permits, and lost-and-found services are available here.

Emergencies

24-hour emergency response, call 911 or 435 676-2411. Garfield Hospital, 435 676-8811, and Clinic, 435 676-8842 are in Panguitch.



Accessibility

Restrooms: the Visitor Center, Sunset Point, Bryce Canyon Lodge, and General Store are fully accessible. Sunset Campground has two sites reserved for people with mobility impairments. The ½-mile section of Rim Trail between Sunset and Sunrise points is paved and mostly level. Inquire at the Visitor Center for information on accessible ranger-led programs, and to obtain an Access Guide.



Restrooms

Available year-round at the Visitor Center, North Campground, Mossy Cave Trail, and Sunset, Farview, and Rainbow points. Restrooms are also available April – October at Bryce Canyon Lodge, General Store, Sunset Campground, Inspiration Point, and Peekaboo Loop.



Phones

Available year-round at the Visitor Center. Phones are also available April - October at Bryce Canyon Lodge, General Store, and Sunset Campground.



Pets

Pets must be leashed; you are required to clean up after your pet. Pets are permitted at park viewpoints, campgrounds, and on paved surfaces or paved trails. Pets are not permitted in buildings or on unpaved surfaces including all trails below the rim.



Horseback Riding

Wranglers lead 2-hour and 4-hour horse and mule rides Spring – October (weather and trail conditions permitting). For same-day reservations, inquire at Bryce Canyon Lodge or call 435 834-5500. For advance reservations: Canyon Trail Rides, P.O. Box 128, Tropic, UT 84776; 435 679-8665. Information: www.canyonrides.com.



Religious Services

Outside the park year-round, may be available in the park during summer months. For more information, inquire at the Visitor Center or the Bryce Canyon Lodge.



Entrance Fees

Private Vehicle: \$25 per vehicle, valid for 7 days in Bryce Canyon National Park.

Individual: \$12 per person (pedestrian, bicycle, motorcycle, and organized group), valid for 7 days in Bryce Canyon National Park.

Bryce Canyon Annual Pass: \$30, valid for one year from date of purchase at Bryce Canyon National Park only.

Commercial Tours: Ask for rates.

Interagency Annual Pass: \$80, valid for one year from date of purchase in all federal fee areas.

Interagency Senior Pass: \$10 lifetime pass for U.S. residents 62 or older.

Interagency Access Pass: Free lifetime pass for U.S. citizens who are permanently disabled.

Annual Pass - Military: Free pass valid one year to active U.S. military and dependents.



Camping

North Campground: Open all year, 101 campsites (only one loop open in Winter). Available first-come, first-served Oct 1 – May 6. RV sites may be reserved May 4 – Sept 23 by calling 877 444-6777 or visit www.recreation.gov. Reservations can be made up to 240 days in advance.

Sunset Campground: Open late spring to early fall, 102 campsites. 20 tent sites are available for reservation up to 6 months in advance, all others first-come, first served.

Fees: Camping is \$15 a night per campsite (half price for Interagency Senior and Access pass holders).

Group Campsite: One site available by reservation only. Group size is limited to 7-30 people and 8 vehicles. Cost is \$55-\$100 per night, dependent upon group size. Campsite may be reserved by calling 877 444-6777 or online at www.recreation.gov.

Dump Station: No hookups are in the park, but a fee-for-use dump station is available in Summer near North Campground.

Other Campgrounds: For camping reservations in nearby National Parks, call 877 444-6777 or visit www.recreation.gov. Public campgrounds are available on US Forest Service, BLM, and Utah State Park lands nearby. Private campgrounds with showers and hookups are available outside the park.



Picnic Areas

Picnic areas are available year-round at Sunset Point, the General Store, Rainbow Point, and Mile 4.5 of the park road, and from April – October at the south end of North Campground. Water is available seasonally at all of the above locations except Mile 4.5 and Rainbow Point. Fire grates are available only at the North Campground Picnic Area.



Lodging

The Lodge at Bryce Canyon: Open March 29 - November 9, 2013. Cabins, motel rooms and suites, a restaurant, and gift shop. For lodging reservations, write to: The Lodge at Bryce Canyon, P.O. Box 640041, Bryce Utah 84764, call 877-386-4383; or visit brycecanyonforever.com.

Other Lodging: Available near the park entrance in Bryce Canyon City and in Tropic, Cannonville, Bryce Junction, and Panguitch.



Food Services

The Lodge at Bryce Canyon: Open March 29 - November 9, 2013. Dining room serves breakfast, lunch, and dinner. Valhalla Pizzeria is open mid-May to mid-October. The General Store, open late March to November 9, has groceries, quick meals, and camper supplies.

Other Food Services: Restaurants are available near the park entrance and in Tropic, Bryce Junction, and Panguitch.



Post Office / ATM / Internet

Ruby's Inn has a post office open Mon-Sat (Bryce, UT 84764), an ATM, and internet services. Personal mail addressed to park visitors will not be accepted at Bryce Canyon National Park.



Wireless Internet (WiFi)

Free wireless Internet access is available year-round at the Visitor Center or seasonally for lodge guests at the Bryce Canyon Lodge lobby (password required).



Showers & Laundry

Coin-operated shower and laundry facilities are available at the General Store, open late March - early Nov., and outside the park at some nearby establishments.



Bicycles

Bicycles are restricted to paved roadways in the park. The nearby Dixie National Forest has a paved bicycle path through Red Canyon, and many miles of challenging and spectacular mountain bike trails. Grand Staircase-Escalante National Monument has countless miles of dirt roads suitable for mountain biking.




Recycling


Recycling bins are located at the entrance to Sunset & North Campgrounds, Sunset Point, Visitor Center, General Store and Bryce Canyon Lodge. Now accepting aluminum cans, plastic (#1-7), cardboard, tin, and glass. Receptacles for recycling small propane cylinders are available at North Campground, Sunset Campground, and the General Store.

Ranger-led Activities




Geology Talk  Hoodoos, ancient lakes and something called frost wedging? Geologists have spent years studying the unique story of Bryce Canyon. Spend a half hour with a ranger as we discuss the current scientific explanation behind Bryce Canyon’s unique geologic history.
Sunset Point **Duration: 30 minutes**



Astronomy Programs  Join Dark Rangers, Volunteers, and NASA Solar System Ambassador Patrick Wiggins, to learn about the heavens, and view Bryce’s night skies through telescopes (weather permitting). Offered most Tuesdays, Thursdays, and Saturdays. Ask at the Visitor Center or look on page 10 for additional information. **Duration: 2 hours**




Rim Walk  Great views, fascinating plant and wildlife stories, a touch of geology, a smattering of cultural history – what more could you want? Join a park ranger for an overview of Bryce Canyon as you stroll along the rim of the Bryce Amphitheater. Daily in the late afternoon June – September, check at the Visitor Center for start times.
Length: 1 mile, Duration: 1.5 hours



Full Moon Hike
Group size is limited to 30 people; *get your first-come first-served tickets at the Visitor Center the morning of the hike*. Not for children under age 6. Offered two nights each month during the full moon. **HIKING BOOTS ARE REQUIRED**. Check page 10 for schedule.
Length: 1.5 to 2 miles
Duration: 2 to 2.5 hours




Evening Program  Bryce Canyon’s diversity comes to life during ranger programs at the Bryce Canyon Lodge, Visitor Center auditoriums, or North Campground Amphitheater (weather permitting). Auditoriums are wheelchair accessible, access to the North Campground facility may require additional assistance.
Duration: 1 hour



Kids Programs (June – August)
While most of Bryce Canyon’s ranger programs are family friendly, some may be too technical for younger children. However, these are fun for kids and parents alike. Rangers present a wide range of programs appealing to a variety of interests. Most Kids Programs, offered occasionally, require reservations – inquire at the Visitor Center.
Duration: 1 hour



Canyon Hike (June – August)
Join a park ranger for a hike down into the heart of the Bryce Amphitheater. Enjoy face to face encounters with hoodoos. Immerse yourself in a labyrinth of breathtaking views and engaging stories about all that surrounds you. Offered occasionally – inquire at Visitor Center.
Length: 1.5 to 2 miles
Duration: 2 to 2.5 hours



Become a Junior Ranger!

Attending a ranger program is the #1 requirement toward completion of your Junior Ranger workbook. Ask how you can become a Bryce Canyon Junior Ranger at the Visitor Center and, while you are there, check the schedule of upcoming ranger programs.

Hike the Hoodoos!

Hiking is great exercise and Bryce Canyon’s “I Hiked the Hoodoos!” program is not just hiking, it’s also a scavenger hunt intended to encourage children to enjoy the great outdoors. Searching for special benchmarks gives them the incentive to earn a reward for their efforts. Follow the instructions below so they can earn the reward while hiking some of the park’s most beautiful trails. One possible route is the famous Queens/Navajo Combination Loop – a 3-mile hike that includes two benchmarks along the way (you *must* find both!). Detailed hiking information can be found on page 7.



Nine special benchmarks like the one pictured at right may be found in the park along trails in the table. Look for signs similar to the photo at left.



Benchmark	Distance	
	miles	km
Mossy Cave	0.8	1.3
Rim Trail	2.5	4.0
Tower Bridge	3.0	4.8
Queens Garden	1.8	2.9
Navajo Loop	1.3	2.2
Peekaboo (from Sunset Point)	2.4	3.9
Wall of Windows (from Bryce Point)	1.6	2.6
Sheep Creek	4.0	6.4
Bristlecone	1.0	1.6

Trail difficulty: **Easy**, **Moderate**, **Strenuous**

“I Hiked the Hoodoos” Program Rules

1. In order to qualify for the reward you must hike a minimum of 3 miles (4.8 km) AND complete the requirements in #2 below.
2. Each individual seeking the reward must have:
1.) Either a pencil rubbing of the benchmark or, 2.) a photograph of themselves standing next to the benchmark.
3. Only special “I Hiked the Hoodoos” benchmarks qualify for the reward. USGS benchmarks found at various locations within the park do not qualify.
4. Please, only one (1) reward per person.

Note: In order to qualify for the reward it may be necessary to hike more than one trail to obtain the number of benchmark rubbings or photos needed to complete the minimum distance requirement (for example: Queens Garden + Navajo Loop or Mossy Cave + Bristlecone + Navajo Loop).

Backcountry Hiking

Bryce Canyon has two trails designated for overnight hiking: the 9-mile Riggs Spring Loop, and the 23-mile Under-the-Rim Trail. Backcountry permits are on a first-come, first-served basis; fees range from \$5 – \$15 depending upon group size. Permits may be purchased at the Visitor Center from 9:00 a.m. – 12:30 p.m. and 1:30 p.m. – 6:00 p.m. daily.

There are two group sites available with a limit of 15 people per site. Campfires are not allowed in the backcountry – use a camp stove to cook meals. Backcountry water sources are unreliable and should be filtered. Each hiker should carry a minimum of one gallon of water for each day they are in the backcountry. We strongly encourage, and at times may require, the use of bear-proof canisters for storing food. Canisters are available for loan free of charge at the Visitor Center.

The 23-mile Under-the-Rim Trail can be accessed by four different connecting trails along the park road. The 9-mile Riggs Spring Loop Trail begins and ends at Yovimpa Point. The park does not provide shuttle service to the southern end of the park. Note that these trails and campsites are in forests and *not* among the hoodoos.

Stop at the visitor center to speak with a ranger and obtain a permit before making any overnight trip into the backcountry. Maps and information on trails, campsites, water availability, and backcountry regulations are available at the Visitor Center. Ask for a free Backcountry Information brochure to aid in planning your trip.



Black Bears are present in Bryce Canyon National Park. Use of bear-resistant food canisters on overnight backcountry hikes is strongly encouraged (and, at times, may be required). Canisters are available for loan, free of charge, at the Visitor Center.



Park Profile

Established

1923 as Bryce Canyon National Monument administered by the U.S. Forest Service; Congress passed legislation in 1924 to create the national park and, in 1928, Bryce Canyon National Park was officially established.

Significance

Established to preserve and protect outstanding scenic and scientific values. Best known for the beautiful and bizarre rock spires called hoodoos and the dark night sky.

Hoodoo

[hoo'doo] n. 1. A pinnacle or odd-shaped rock left standing by the forces of erosion. 2. v. To cast a spell or cause bad luck. 3. Voodoo.

Elevation / Size

Lowest: 6,620 feet (2018 m) Yellow Creek. Highest: 9,115 feet (2778 m) at Rainbow Point. 55 square miles (35,835 acres)

Name

Ebenezer and Mary Bryce lived in the area from 1875-1880 and aided in the settlement of southwestern Utah and northern Arizona.

Humans

Archaeological studies indicate Ancestral Puebloans probably lived in the area from 2,000 years ago, followed by the Fremont Culture through the 1200s. Then the Southern Paiutes inhabited the area until about 100 years ago. Mormon settlers arrived in the 1870s. Park visitation in 1929 was 22,000; last year it was 1.3 million.

Plant Life

More than 400 native plant species live in the park. Pinyon pine and juniper grow among the hoodoos at low elevations; ponderosa pine forests dominate the plateau top; fir and aspen thrive at the highest elevations. Bristlecone pines, some more than 1,600 years old, live at various elevations throughout the park.

Animal Life

Utah Prairie Dogs, a federally threatened species, can be seen in open meadows. Mule Deer and Pronghorn (mistakenly known as Antelope) are the most common large mammals seen. Mountain Lions and Black Bears live in the park, but are rarely seen. Over 200 species of birds visit Bryce.

Bryce Canyon Lodge

Designed by Gilbert Stanley Underwood and built in 1925, it is a National Historic Landmark. Of the four lodges in the Union Pacific Loop Tour (Bryce Canyon, Cedar Breaks, Zion, and Grand Canyon-North Rim), the Bryce Canyon Lodge is the only original of these structures still standing.

Hoodoos: The Odyssey of an Oddity

The geologic history at Bryce Canyon National Park is rich and complex. Many processes and events have interacted over vast amounts of time to create and continually alter this unique landscape. The story begins long before multicolored hoodoos emerged from this limestone that geologists call the Claron Formation. First, you need to lithify sediments – turn them to rock. Before lithifying sediments, you need to trap them in a basin. To build a basin you need to first build mountains.

Approximately (~) 200 million years ago (Ma), Earth's crust was crinkling throughout Nevada, into southern Canada. A strong, dense Pacific sea floor had smashed into North America's weaker continental crust. Much was at stake as the loser would be forced down and melted in Earth's mantle. Although North America remained on top, it was shattered in the contest. Over the 120 million year match, compressional forces bent, folded, broke, and heaved our crust into the sky, giving birth to the once mighty Sevier Mountains. Given enough time, rain and snow become geologic jackhammers splitting mountains apart. From the mountains, streams and rivers carried debris eastward, pulverizing the boulders to mud in transit.

Slightly before the dinosaurs went extinct, ~ 65 Ma, the land in the Western U.S. changed dramatically. Down but not out, the oceanic plate pushed up our continental crust, stubbornly surfing atop the mantle instead of sinking and melting. This attempt at escaping uplifted land, forming the Rocky Mountains and warping Utah and Arizona. The continued slow uplift shaped a land-locked basin between the Sevier Mountains and the younger Rockies. When the rivers wearing down the Sevier Mountains reached this basin they became braided streams and deposited layers of muds and silts. At the lowest levels, chains of lakes and ponds formed. Water escaped through evaporation, but with no rivers flowing out of the basin, the sediment was trapped. Between 55 - 30 Ma this mammoth mud puddle, known as the Claron Basin, continued to fill with sediments rich in calcium carbonate – dissolved limestone.

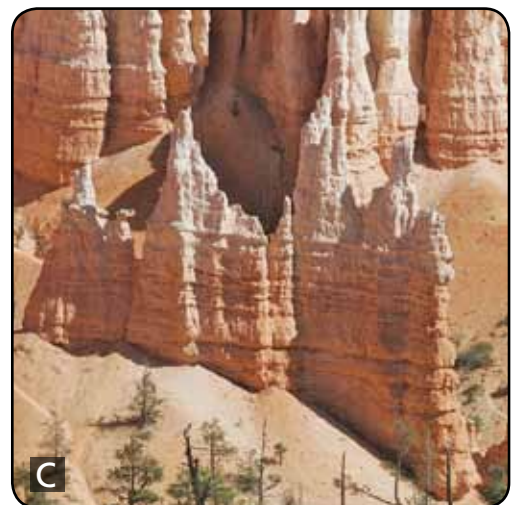
The Claron Formation consists of two types of limestone rock. It has a lower pink member and an upper white member. In the early years of the basin, the environment

appears to have been more marsh-like, where plant roots helped oxidize iron to give the sediments a red color. Within the pink member, thin and non-continuous gray layers formed, suggesting that individual ponds within this marsh setting became so salty and/or mineralized that only cyanobacteria could survive. These algal-like creatures enriched limestone with magnesium they took from the water to create dolostone – important to hoodoo formation. With the passage of time and an increase in water depth, the basin transitioned into purer lakes where the less iron-rich white limestone was deposited.

Geologists are unsure as to this mud puddle's fate as rocks that might have recorded this story do not exist. Did it evaporate away? Was it eventually drained as the basin was uplifted? What geologists are sure of is that over time these beds of sediment were compressed into rock and uplifted from 3000 ft to ~9000 ft in elevation. This uplift began ~15 Ma, forming the Colorado Plateau. About 8 Ma, the Bryce Canyon area broke off this uplift as the Paunsaugunt Plateau and has been sinking ever since into the Great Basin.

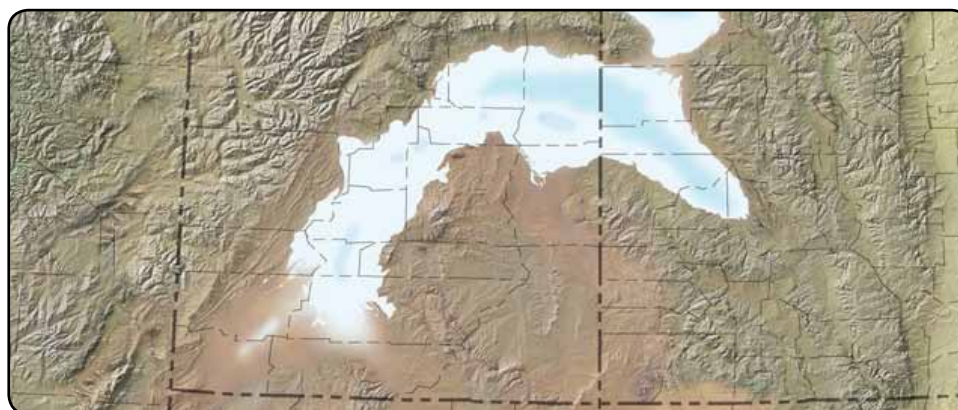
Technically, Bryce is not a canyon because canyons are primarily carved by flowing water – a stream or a river. Naturally acidic rainwater dissolves limestone, making the rounded edges of hoodoos, but the freezing and thawing of water does most of the sculpting at Bryce Canyon.

Approximately 200 days a year, ice and snow melt during the day and refreeze at night. When water becomes ice, it not only gets harder but expands to ~110% its original volume! This exerts enormous pressures on the rocks, forcing them apart from inside the cracks. First attacking the fractures created during uplift and faulting, the rock is chiseled into broken remains. Monsoon rains remove this debris, helping to reveal fins, the first step in hoodoo creation. Most commonly, the second step in hoodoo formation begins when frost-wedging cracks the fins, making holes we call windows. When windows collapse they create the rust painted pinnacles we call hoodoos. We often think of this process as hoodoo creation; when, in reality, it's just another step in water's endless process of destroying the rocks it began creating 55 million years ago.



Look closely at the rock formations and it becomes easier to see the progression from fins (A), which develop windows (B), that later collapse to form hoodoos (C).

Although visitors to Bryce come to see the hoodoos in the Claron Formation, five other rock formations also exist in the park. They tell stories of dinosaurs, beaches, and of a sea that once separated North America into two large islands. Ask a ranger to learn more about these times in Earth's history.



Utah region 50 million years ago. Sediments eroded from mountains in northwestern Utah were deposited in a lake, lithified (turned to stone), and later uplifted to be re-eroded into hoodoos.

Bryce Canyon Geology Festival

July 26 – 27, 2013

featuring

Special Guest Speakers

Geology Talks

Kid's Programs

& more

A Threatened Resident - Utah Prairie Dogs

A year-round inhabitant of Bryce Canyon’s high plateau meadows is the Utah Prairie Dog, *Cynomys parvidens*. Although called a prairie “dog”, this species is actually a member of the rodent family. Prairie dogs live in complex social colonies or “towns.” Their burrow systems are made up of several chambers and provide the animals with protection from predators, places to raise young, store food, and hibernate through the cold winter months. Utah Prairie Dogs are considered “keystone species” that perform a variety of important ecological functions including soil aeration which helps plants grow, providing prey for other animals, and maintaining healthy meadow ecosystems.

The Utah Prairie Dog’s range is the most restricted of the five prairie dog species in North America and is limited to the southwestern quarter of Utah. Once nearly eradicated through poisoning, disease, habitat loss and drought, Utah Prairie Dogs currently number less than 5,000 animals. The Utah Prairie Dog has been federally listed under the Endangered Species Act

since 1973 and is protected as a threatened species. Bryce Canyon National Park reintroduced the Utah Prairie Dog from 1974 through 1988 and is the only National Park Service unit where they occur. Today, approximately 200 Utah Prairie Dogs are found within several meadow complexes within the



Kevin Doxstater

Park. Every year these colonies are monitored and counted to track the health of the animals and their habitat.

Although protected, the Utah Prairie Dog still faces challenges to its survival as human development, disease and drought continue to threaten remaining colonies. Please help us protect our Utah Prairie Dogs!

- Drive slowly around prairie dog towns – they live in the Park’s meadows and can be seen next to and sometimes crossing roads.
- Do not feed or approach prairie dogs: it is illegal, stressful for the prairie dogs, and potentially dangerous! All prairie dog species may carry and transmit diseases to humans. By feeding wildlife you decrease their ability to survive in the wild.

Bryce Canyon National Park is helping to recover and protect the Utah Prairie Dog. We’re lucky to have this special animal within the Park – please appreciate these amazing creatures from a distance!



What Other Animals Live Here?

For a small park, Bryce Canyon has several types of habitat which support a diversity of wildlife. While you may not see lots of any one species, you will see a variety of animals if you know when and where to look.
Habitat: Sagebrush, Meadow, Forest, Canyon, All habitats
Season: W=Fall/Winter, S=Spring/Summer, A=all seasons
Best time to look: d=day, t=twilight, b=both day and twilight
Difficulty in finding: e=easy, h=hard, u=unlikely

Please report all sightings of predators (black bear, mountain lion, foxes, bobcat, coyote, etc.) to a Park Ranger or the Visitor Center. In addition, please report any wildlife skilled or struck on the road to a Park Ranger. Studying road-killed wildlife helps Park Resource Managers track animal diseases such as plague and rabies.

Mammals:		Birds:			
Mule Deer	A,b,e	Turkey Vulture	S,d,e	Dark-eyed Junco	A,d,e
Pronghorn	A,d,h	Golden Eagle	A,d,h	Violet-green Swallow	S,d,h
Elk	W,t,h	Red-tailed Hawk	S,d,h	W. & Mtn. Bluebirds	S,d,h
Prairie Dog	S,d,e	Peregrine Falcon	S,d,u	Western Tanager	S,d,e
Coyote	A,b,h	Wild Turkey	A,d,h	Pygmy Nuthatch	A,d,h
Gray Fox	A,b,h	Dusky Grouse	A,d,h		
Ringtail	A,t,h	Mourning Dove	A,d,h	Reptiles/Amphibians:	
Black Bear	A,b,u	Great Horned Owl	A,b,u	G.B. Spadefoot Toad	S,d,u
Mtn. Lion	A,b,u	N. Saw-whet Owl	A,t,u	N. Leopard Frog	S,d,h
Jackrabbit	A,b,e	C. Nighthawk	S,t,e	Short Horned Lizard	S,d,e
Cottontail	A,b,e	C. Raven	A,d,e	Sagebrush Lizard	S,d,h
Squirrels	S,d,e	Clark’s Nutcracker	A,d,e	Gopher snake	S,d,u
Chipmunks	S,d,e	Steller’s Jay	A,d,e	W. Rattlesnake	S,b,h

NEVER approach or attempt to feed any wild animal!

Travels in Time: Bryce Canyon Lodge

As the number of America's national parks grew in the early 20th century, so did their popularity. Travel to and from the parks was difficult, and obtaining food and lodging was equally challenging in the remote areas in which they were located. Beginning at Yellowstone National Park, and soon spreading to other parks across the west, the railroads began bringing passengers to the parks while also building lodges so they would have a place to stay. In southern Utah, that railroad was the Union Pacific and, in 1924, their subsidiary, Utah Parks Company, began construction of the Bryce Canyon Lodge. They would build three additional lodges in the region at Zion, Grand Canyon North Rim, and Cedar Breaks, offering a travel package sometimes referred to as The Grand Circle Tour (or Loop Tour).

Designed by Gilbert Stanley Underwood, who also was the architect for the Ahwahnee Hotel in Yosemite National Park, the Bryce Canyon Lodge and Cabins are listed on the National Register of Historic Places. Due to their national significance, together they have also been designated a National Historic Landmark. The lodge and cabins were constructed using local timber and stone, with most of the workforce coming from the area. The lodge received its first guests in 1925 and, over the next four years, the main lodge building would be expanded and additional



Map showing Union Pacific's Grand Circle Tour route.

cabins built. Underwood tried to design his buildings to blend in with their environment, and one unique aspect of the lodge buildings at Bryce Canyon is their roofs. The irregular pattern in the shingles give the roof a wavy, or undulating, appearance. The purpose for this is to mimic the effect of pine boughs (large branches) moving in the wind.

Passengers would arrive in Cedar City by train, then ride in touring autos (and, within a short time, 14 passenger touring buses) that took them to the parks. The first stop on the tour would be Zion, followed by a brief visit to Kaibab National Forest, from there to Grand Canyon North Rim, Bryce Canyon, and Cedar Breaks before returning to Cedar City.

Of the four lodges designed by Underwood for Utah Parks Co., the Bryce Canyon Lodge is the only original structure that remains. Open from late March to early November, the lodge is a beautiful structure that is worth stopping to see. The dining room serves breakfast, lunch, and dinner daily during the Lodge's season. The auditorium, completed in 1927, is home to evening ranger programs during the summer season (inquire at the Visitor Center or Lodge for schedules).



Touring autos with their passengers at Bryce Canyon Lodge in the mid 1920s.

Help Stop Animal Cruelty

Feeding wild animals is a sad example of how good intentions can unwittingly cause serious harm. In fact, feeding wildlife is actually a form of animal cruelty! Fed animals frequent roads and parking lots where they are likely to get run over by cars.



Furthermore, wild animals have very strict natural diets with very specific types of digestive bacteria. Human food causes the wrong type of digestive bacteria to become dominant. Soon, fed animals can no longer digest their natural foods and ultimately will starve to death with full stomachs. What could be more cruel?

Fed animals teach offspring to beg for food. The young animals may never learn the necessary skills to find natural foods and grow up totally dependent on humans for survival.

The act of feeding wildlife can also be dangerous to people. Rodents notoriously transmit diseases. You put yourself in jeopardy every time you get within flea-jumping distance 6-9 feet (2-3 m) of a squirrel or prairie dog. Worse yet, feeding can cause normally docile animals, like deer, to become aggressive. In one sad instance at Yosemite National Park, a young child was gored and killed by a “spike” deer buck when he refused to relinquish his sandwich to the animal.

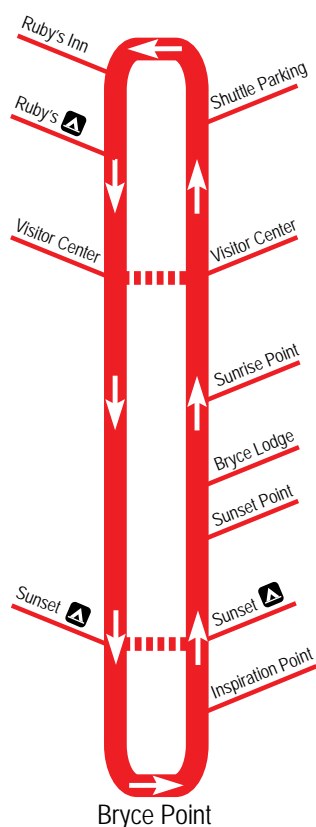
Giving in just once to the big, brown, pleading eyes of a cute animal can have major consequences. Be responsible. Learn to be a friend of wildlife by not trying to befriend animals with food.

Please spread the word. True animal lovers don’t feed wild animals. *Help protect your national parks.*

Ne donnez pas à manger aux animaux!
¡No dé comida a los animales!
Bitte nicht die Tiere füttern!
Please do not feed the animals!

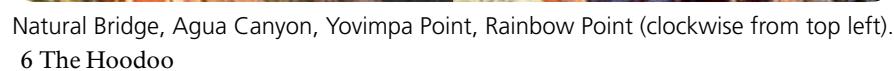


Bryce Canyon Shuttle

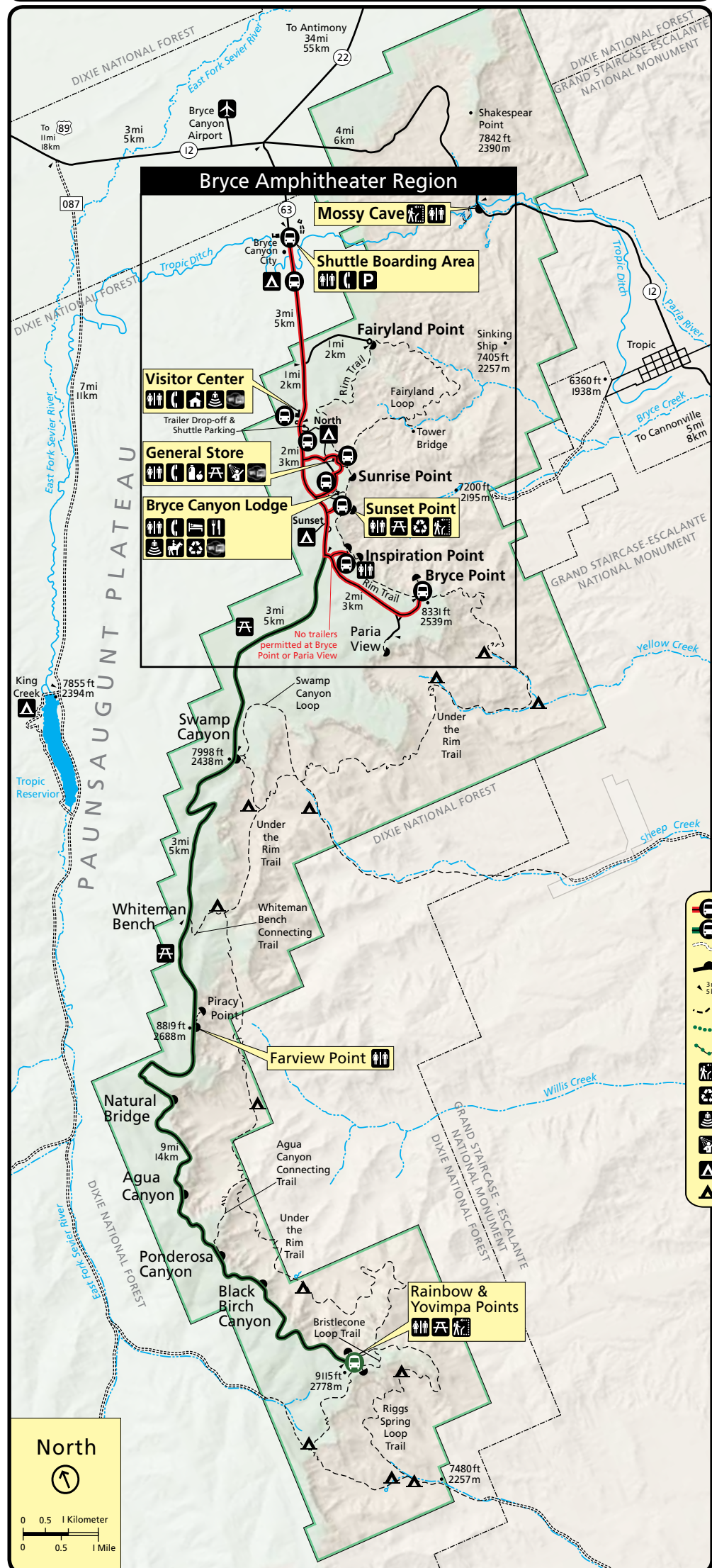


LAST BUS	Enters Park	Leaves Bryce Pt.	Leaves Park
May 10 – 23	6:05 pm	6:20 pm	6:50 pm
May 24 – Sep 14	7:05 pm	7:20 pm	7:50 pm
Sep 15 – Oct 5	6:05 pm	6:20 pm	6:50 pm
Oct 6 – Oct 13	5:05 pm	5:20 pm	5:50 pm

Scenic Drive Highlights . . .

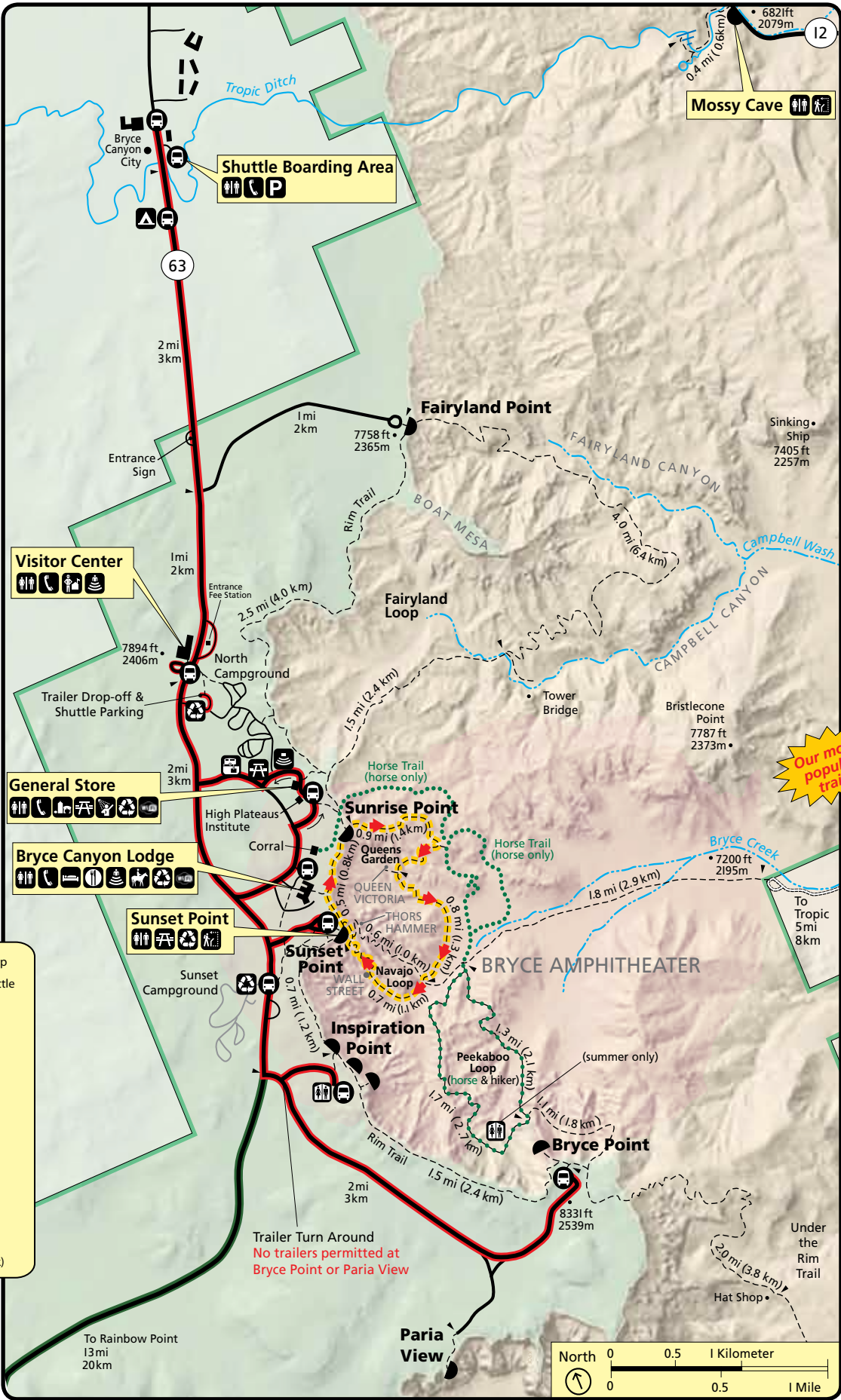


Bryce Canyon National Park



Hiking the Park

Bryce Amphitheater Region



Hiking Reminders...

- **CAUTION!** Rocks occasionally fall on most hiking trails. If you see or hear active rockfall, leave the area.
- Wear hiking boots with lug soles and ankle support.
- Carry plenty of water; drink a quart/liter for every 2 to 3 hours of hiking.
- Park elevations reach over 9115 feet (2778 m). Even mild exertion may leave you feeling light-headed and nauseated.
- Know and respect your own physical limitations.
- Trails with this symbol are used by horses April-October. Horses have right-of-way. Stand on uphill side of trail to let horses pass. Give them warning of your presence. Talk, don't shout.
- Stay on maintained trails. Do not take short cuts.
- Do not feed the wildlife. Do not throw anything, anywhere, at any time.
- Be respectful of others; keep noise levels down—no shouting.
- Pack out all trash including tissue paper and cigarette butts.
- Pets are not permitted on any unpaved surface or trail, including all trails below the rim.
- Uphill hikers have the right of way.
- Remember, you are entering a wild setting. Ultimately, you are responsible for your safety and the safety of those around you. Take what you bring; leave what you find.

Day-Hiking Trail Guide

Where's a Good Hike? Bryce Canyon has 8 different day-hiking trails. Because many of these trails are interconnected, our most popular hikes are combinations of two or more of these basic trails. **If you can only do one hike, the Queen's/Navajo Combination Loop might be the best choice.** Take this page with you while hiking.

TRAIL NAME / STARTING POINT	ROUND TRIP	ELEVATION CHANGE	DESCRIPTION
Easy to Moderate Hikes (gentle grades & minimal elevation change)			
MOSSY CAVE* North end of Bryce along Hwy 12 (not a loop)	0.8 mi 1.3 km 1 hour	 6920ft 2109m 6827ft 2080m 200ft 61m	Streamside walk up to a mossy overhang and small waterfall. (Waterfall flows May-October.)
SUNSET TO SUNRISE Sunset Point (not a loop)	1.0 mi 1.6 km 1 hour	 8024ft 2446m 8000ft 2080m 34ft 10m	Paved portion of Rim Trail; fairly level from Sunset Point to Sunrise Point. Sunrise Point overlook NOT wheelchair accessible.
RIM TRAIL* Anywhere along rim (not a loop)	1.0-11.0 mi 1.6-17.7 km (you pick start and end points)	 8315ft 2534m 7780ft 2371m 1177ft 359m	Outstanding views of hoodoos from above. Trail is paved and fairly level between Sunset and Sunrise Points.
BRISTLECONE LOOP* Rainbow Point	1.0 mi 1.6 km 1 hour	 9115ft 2778m 8939ft 2725m 200ft 61m	Hike through spruce-fir forests to cliffs with bristlecone pines and expansive vistas.
QUEENS GARDEN* Sunrise Point (not a loop)	1.8 mi 2.9 km 1-2 hours	 8001ft 2439m 7676ft 2340m 357ft 109m	The least difficult trail into the canyon. See Queen Victoria at the end of a short spur trail.
Moderate Hikes (steep grades with "down & back" elevation change)			
NAVAJO LOOP* Sunset Point	1.3 mi 2.2 km 1-2 hours	 8000ft 2438m 7476ft 2279m 550ft 168m	See Wall Street, Two Bridges, and Thors Hammer on this short but steep trail. <i>Clockwise direction recommended.</i>
QUEENS/NAVAJO COMBINATION LOOP* Sunset or Sunrise Point <i>World's best 3-mile hike!</i>	2.9 mi 4.6 km 2-3 hours	 8001ft 2439m 7476ft 2279m 600ft 183m	Combine two trails described above with the Rim Trail to form a loop. <i>Clockwise direction recommended.</i>
TOWER BRIDGE* North of Sunrise Point (A portion of the Fairyland Loop - not a loop)	3.0 mi 4.8 km 2-3 hours	 7984ft 2433m 7210ft 2197m 802ft 245m	See bristlecone pines and the China Wall. A shady 1/4-mile spur trail leads to the bridge.
HAT SHOP Bryce Point (not a loop)	4.0 mi 6.4 km 3-4 hours	 8315ft 2534m 7380ft 2249m 1075ft 328m	Descend Under-the-Rim Trail to see a cluster of balanced-rock hoodoos.
SHEEP CREEK/SWAMP CANYON LOOP* Swamp Canyon	4.0 mi 6.4 km 3-4 hours	 8079ft 2463m 7432ft 2285m 647ft 198m	Start at Swamp Canyon viewpoint for a beautiful hike through a section of Bryce Canyon's backcountry. Good route-finding skills a must.
Strenuous Hikes (steep grades with MULTIPLE elevation changes)			
FAIRYLAND LOOP* Fairyland Point or north of Sunrise Point	8.0 mi 12.9 km 4-5 hours	 8075ft 2461m 7142ft 2176m 1736ft 523m	See the China Wall, Tower Bridge and tall hoodoos on this spectacular, less-crowded trail.
PEEKABOO LOOP* Bryce Point	5.5 mi 8.8 km 3-4 hours	 8315ft 2534m 7429ft 2284m 1571ft 479m	Steep but spectacular hike through the heart of Bryce Amphitheater. See the Wall of Windows.
NAVAJO/PEEKABOO COMBINATION LOOP* Sunset Point	4.9 mi 7.8 km 3-4 hours	 8000ft 2438m 7390ft 2252m 1581ft 482m	Combine Navajo and Peekaboo Loop Trails into a mini figure-8.
THE 'FIGURE 8'* (QUEENS GARDEN/PEEKABOO/NAVAJO COMBINATION) Sunrise or Sunset Point	6.4 mi 10.2 km 4-5 hours	 8001ft 2439m 7390ft 2252m 1633ft 497m	Combine Queens Garden, Peekaboo Loop, and Navajo Trail into one ultimate hike!
BRYCE AMPHITHEATER TRAVERSE* Bryce Point (May to Oct during shuttle operations)	4.7 mi 7.5 km 3-4 hours	 8315ft 2534m 7390ft 2252m 3030ft 908m	Descend from Bryce Point. Turn left (clockwise) on Peekaboo Loop to canyon floor and climb Queens Garden Trail to Sunrise Point. Hike or ride shuttle back.

* Trails marked with an asterisk are part of the "Hike the Hoodoos!" adventures described on page 3.

Lightning Safety



A bolt of lightning contains about a billion volts and can reach 50,000 degrees Fahrenheit! This photo was taken from Sunset Point.

Take Lightning Seriously

Summer storms at Bryce Canyon bring lightning, a powerful force which can and does kill. Take a look along the canyon’s edge, and you’ll soon spot one of the countless trees that have been struck. Don’t let that be you!

Here at Bryce Canyon, lightning has claimed the lives of three visitors in the past 18 years. Six other visitors have been seriously injured by lightning strikes.

In the state of Utah, Bryce Canyon is the second most common place for lightning fatalities and injuries, behind the Uinta Mountains. Considering that the park is much smaller in area, Bryce Canyon has the highest lightning hazard density in the state!

Where is it Safe?

The safest place to be is in an enclosed building with walls, roof, and floor (such as the Visitor Center). The next best place is in an enclosed vehicle.

If you can’t get to a safe location, avoid the most dangerous places and activities, including higher elevations, wide-open areas, tall isolated objects, water-related activities and open vehicles. **Do not go under trees to keep dry during thunderstorms!**

How Do I Plan for Safety?

In this area, thunderstorms usually occur in the afternoon during July and August. If possible, plan your outdoor activities for the early part of the day. Learn and practice the **30/30 Rule** (see below).

When is it Time to Seek Shelter?

Begin counting as soon as you see a flash of lightning. If you CANNOT **count to 30** (i.e., 30 seconds) between the flash and hearing its thunder, it is unsafe to be outdoors. You should seek shelter immediately.



When is it Safe to Go Back Outside?

It is not safe to be outdoors until at least **30 minutes** after you hear the last thunderclap or see the last flash of lightning.

Don’t be fooled by the bright sunshine overhead! Lightning can strike away from the dark clouds. Be alert to new storms developing in the area.

Remember, your safety is YOUR responsibility. Learn the signs of an impending lightning storm. Be willing to alter your visit to make the safe choice. Practice the 30/30 rule.

Fire: A Burning Issue



Trees that were cut down in the park stacked in “burn piles.”

You may notice signs of forest fires here at Bryce Canyon. While some of the fires were started by lightning, others were intentionally set by park management using a practice called prescribed burning. You may have also wondered about the piles of wood seen between North Campground and Sunset Point.

Fires were once a common natural occurrence throughout this area. Before the late 1800s, lightning frequently started low intensity fires that occurred every 3 to 7 years prior to Euro-American settlement of the region. These fires rejuvenated plant growth, recycled soil nutrients, cleared undergrowth, and increased wildlife habitat diversity. Grazing, fire suppression, and other land management practices have altered this natural cycle. This has led to an unhealthy forest with dangerous accumulations of dead trees and underbrush in some areas of the park.

A primary mission of the National Park Service is the conservation of dynamic natural processes. At Bryce Canyon, the wise use of fire is an important tool in the effort to restore a healthy balance to our forest ecosystems. Here, fire managers ignite fires under a prescription that considers public safety, favorable weather conditions, and probability of meeting management objectives. In

addition, lightning ignited fires are allowed to burn within areas that have previously been determined to meet ecological and cultural objectives safely.

The park contains a large number of historic structures built in the 1920s and 1930s, including the Bryce Canyon Lodge and Cabins. The forests in this area have become overgrown, with as many as 200 trees per acre in some places. Typically, healthy Ponderosa Pine forests in this region should contain only about 40 trees per acre, with regular localized fires clearing dead wood and underbrush naturally. Instead of burning this area and putting historic structures at risk, the park has chosen to thin the trees and will ignite the “burn piles” during the winter months. Burning with snow on the ground reduces the potential for the fire to spread and safely consume the thinned wood. Once the snow melts in the spring, visitors to Bryce Canyon may see blackened circles on the ground where the burn piles used to be.

The healthier forest that results from these fire management practices will protect the buildings from high severity fire, increase visitor safety, and improve habitat for wildlife species that make Bryce Canyon National Park their home.



Firefighter using a drip torch to ignite burn piles.

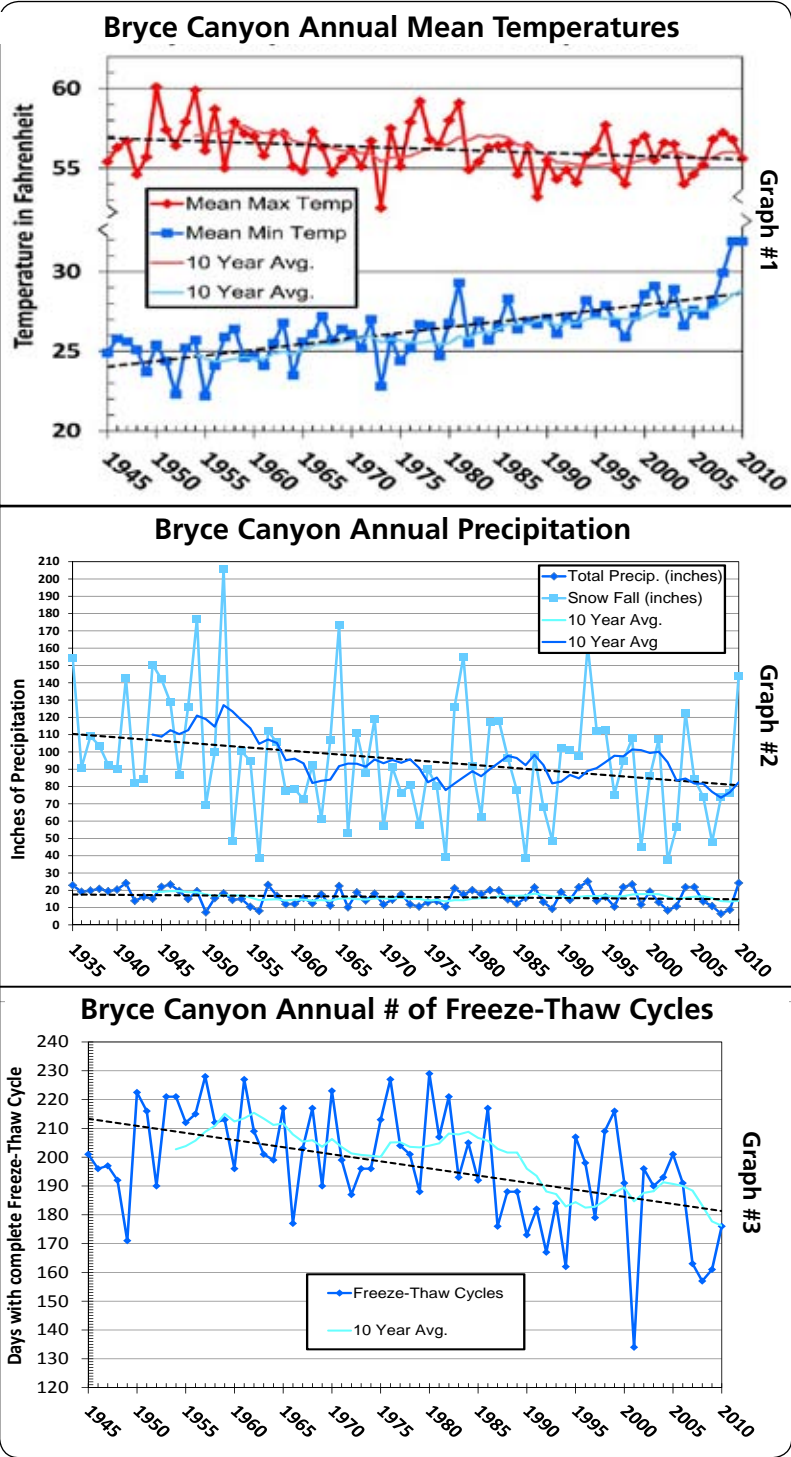
Is This Weather Normal?

WEATHER AT BRYCE CANYON		MONTH											
		J	F	M	A	M	J	J	A	S	O	N	D
TEMPERATURE (°F)													
Normal Daily Maximum		37	38	45	54	64	75	80	77	70	58	45	36
Normal Daily Minimum		15	17	23	29	37	45	53	50	42	32	23	15
Extreme High		59	64	67	75	85	92	98	90	86	79	68	60
Extreme Low		-26	-26	-11	-3	13	21	28	23	16	0	-12	-23
Avg. # of Days that rise above 90°F		0	0	0	0	0	1	1	1	0	0	0	0
Avg. # of Days that drop below 32°F		31	28	30	27	18	5	<1	<1	8	25	29	31
PRECIPITATION													
Normal		1.8	1.4	1.5	0.8	0.8	0.6	1.6	2.0	1.8	2.0	1.3	1.2
Maximum		7.4	6.0	4.9	5.8	3.5	3.3	5.7	7.7	5.4	6.4	7.3	3.7
Maximum 24 hr. Precipitation		3.3	2.3	1.8	1.2	1.2	1.2	1.4	2.2	2.1	2.6	1.4	3.3
Normal Snowfall		17	18	17	8	2	0.1	0	0	0.1	3	10	14
Maximum Snowfall		82	55	46	62	18	2.5	T	T	2	16	36	50
Days with Measurable Precipitation		6	6	7	5	5	4	7	10	7	5	5	5
Average # of Thunderstorms		0	0	0	1	3	2	11	12	4	1	0	0
SUNSHINE / CLOUDINESS													
Number of Clear Days		9	7	9	10	12	17	16	16	18	17	11	10
Number of Cloudy Days		14	13	14	11	9	5	5	5	4	7	8	13
% Possible Sunshine		58	64	60	69	73	83	77	79	80	76	62	60

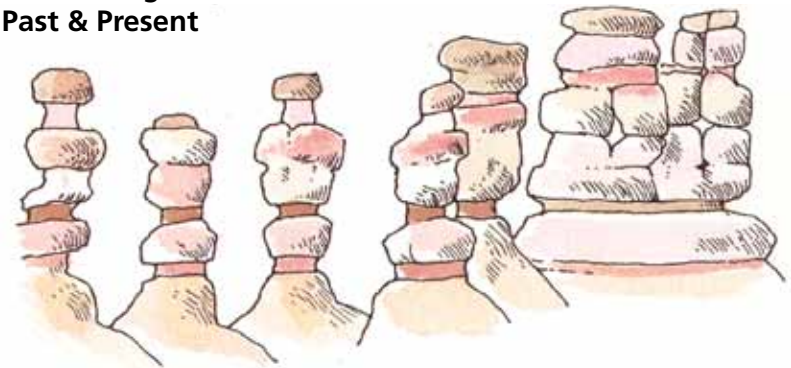
How is the weather? A 2011 review of 65 years of weather data recorded at the park has shown some changes are taking place in long term climate patterns. For example, the data shows that, while summer mean high temperatures are on the decline, winter mean low temperatures have been rising. With the rise in winter temperatures, the number of annual freeze-thaw days has decreased from nearly 220 to less than 180. Total snowfall has also declined, while summer rainfall amounts have increased (though not enough to compensate for the amount of water lost by decreased snow pack. As Bryce Canyon’s climate is directly responsible for the formation of hoodoos (see the geology article on page 4), it is difficult to predict how Global Climate Change will affect the park in the future. Will the dramatic shapes and colors that make Bryce Canyon what it is today become little more than lowly lumps of soil tomorrow? Only time will tell . . .

Charting the Past & Present to Avoid an Unwanted Future

Bryce Canyon may already be experiencing the effects of global climate change. Sixty-five years of weather data from our National Weather Service Climatological Station (see graphs below) documents meaningful trends, while other discoveries, though anecdotal, are even more attention-getting.



Frost-Wedged Hoodoos: Past & Present



Rain Eroded Hoodoos Our Future?



Throughout geologic history, increases of carbon in Earth's atmosphere have caused warming and, as the Earth warms, even more carbon is released into the atmosphere. Not since the Yucatan asteroid wiped out the dinosaurs has this self-perpetuating relationship, now fueled by increasing human-produced carbon dioxide, created such rapid change as measured in the last several decades. From graph #1 you will notice that while our maximum temperatures are decreasing slightly, our low temperatures are soaring. In just 65 years, Bryce Canyon's average annual low temperature has increased by 5° F! This is one of the most rapid increases ever recorded.

In 2002, one of the hottest summers on record, Tropic Ditch which carries irrigation water from Tropic Reservoir, through Bryce, to the town of Tropic, *ran dry* – the first time since its 1892 completion! To protect this historic water supply all but the section flowing along the Mossy Cave Trail was "piped" in 2010 - an expensive undertaking indeed! Tropic Reservoir gets most of its water from snow-melt. (Note snowfall decline in graph #2.) Our snow-pack is also crucial to our natural springs. In 1998, flush-toilets and drinking water were removed from Rainbow Point due to steadily diminishing flows from the Yovimpa Spring.

At Bryce Canyon, lightning causes more fatalities than even falling deaths. Graph #2 shows that while snowfall is declining, total precipitation remains unchanged. This means that snow is being replaced by rain. Here, increased rain means increased thunderstorms and lightning danger, as well as more flash-flooding. Sections of Bryce Canyon's Under-the-Rim-Trail and two backcountry campsites were obliterated by severe flash-floods in 2010.

Perhaps even our hoodoos are vulnerable to global climate change. Frost-wedging keeps these limestone spires tall and vertical, while chemical weathering from acids in rainwater smooths and rounds them off. All three graphs (but especially #3) show that frost-wedging winters are giving way to more rainy summers. In the future our hoodoos may become lowly lumps, instead of the statuesque towers the world comes to see.

Yet all hope is not lost. Though climate change is a daunting and malignant problem, it has been likened to smoking. It's never too late to quit the bad habit. Your health will improve once further harm is halted. Planet Earth, like the human body, is very good at healing itself if given the chance. Mother Nature not only sequesters (cleans up) 100% of the carbon dioxide she produces naturally, she also cleans up 43% of humanity's mess. However, that still leaves us 57% over budget!

There are many ways to reduce your carbon footprint. Some require planning, others merely require modifying your lifestyle a bit, and others may save you money. Decide what makes sense for your family. A great place to start is by reusing, reducing, and recycling. Is affordable green energy available at home? Can you use public transportation more often? Perhaps your electric company can complete a home energy audit for you. Remember that *everybody* benefits as each of us takes action. Because our planet, including your national parks, will directly benefit from greener living, we sincerely appreciate *everybody's* effort to lower his or her carbon footprint.

The "Coolest" Ways to Visit Bryce

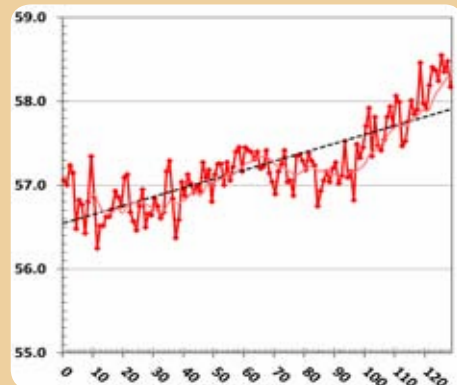
- Ride the Bryce Canyon Shuttle.
- Don't idle your car, RV, or bus while parked.
- Buy and use refillable water bottles.
- Use our recycling bins (locations on map).
- Calculate your carbon footprint using Bryce Canyon's Junior Ranger Booklet.
- Look for area restaurants certified by the Green Restaurant Association.

Do You Want to See Reality or Something Better?

Graphs are commonly used to explain global climate change science. Unfortunately, reading graphs can be difficult. Sometimes concepts are too complicated, or the change is too subtle. Still other times, human nature makes it hard for us because we find it easier to believe what we want to believe!

Nobody likes bad news and because so much of climate change is bad news, many prefer to ignore, be skeptical, or just plain deny valid data.

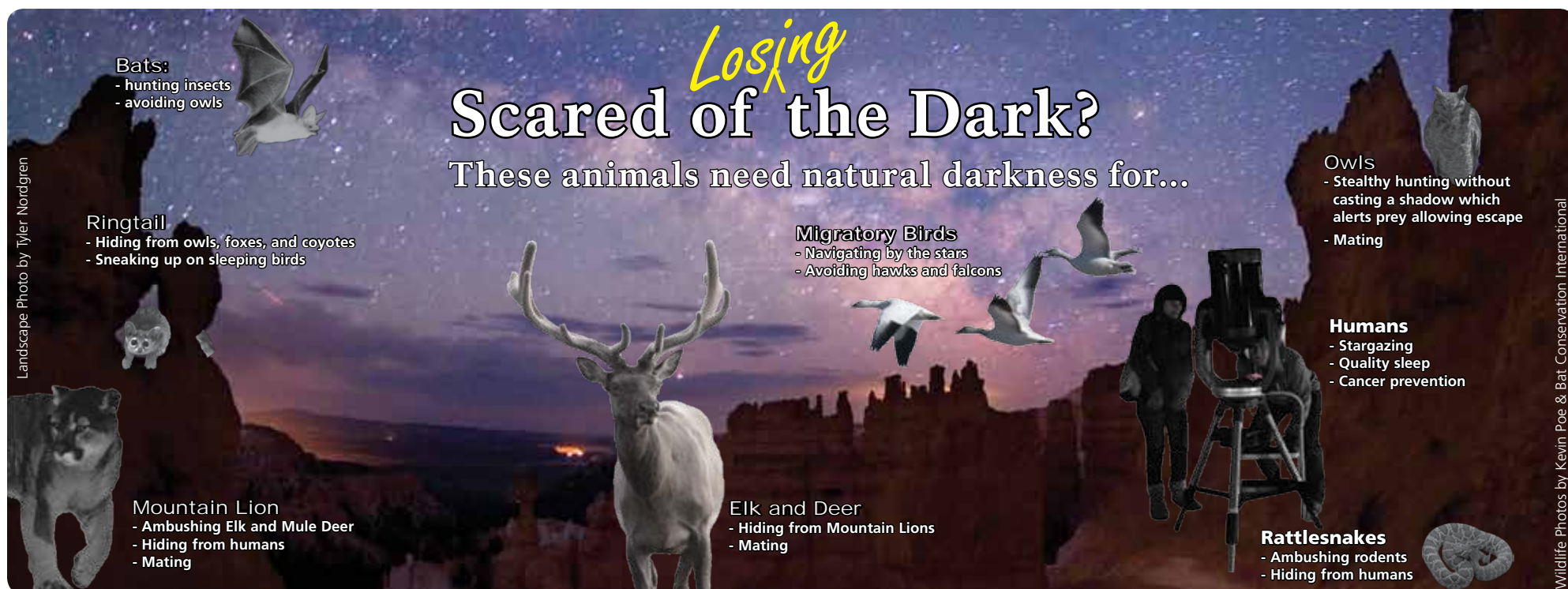
Consider the two graphs below. One shows 128 years (1880-2008) of average global temperature increase, while the other shows 128 weeks (Nov. 2008 - April 2011) of stock performance for Apple®. Though both graphs are very similar, many people will see one graph as obvious proof of a profitable company with whom to make long term investments, while the other graph is merely questionable science that doesn't require any immediate action. Why?



Ask a Bryce Canyon ranger if you're not sure which graph is which.

Cooling the Climate While at Home

- Efficiently heat your home using air conditioner by adding a "Heat Pump."
- Upgrade to long-lasting LED lights.
- Weather proof your home with double or triple pane/glazed windows.
- Ask your utility provider about green energy pricing options.
- Use mass transit and/or carpool.
- Skip a phone/computer/auto upgrade
- Plastic = oil, avoid excess packaging.
- Eat locally, avoid processed foods.
- Consult Bryce Canyon's Jr. Ranger Booklet for other carbon reductions.



Some people are afraid of the dark. Yet, Bryce Canyon's night-sky advocates, "The Dark Rangers," are scared of the light! Perhaps you'd be fearful too, if it was your job to protect that last grand sanctuary of natural darkness.

Watching wildlife is often why people visit national parks. But did you know that so many of your favorite animals are nocturnal? All amphibians, most mammals, and many bird species are nocturnal. As shown above, any human light that exceeds the brightness of a full Moon, upsets the predator/prey balance, confuses navigation, disrupts reproduction, and displaces animals from otherwise healthy habitat. Because the light from cities can shine over 200 miles (300km), protecting park wildlife from artificial light can only be achieved if everybody switches to night-sky friendly lights.

Night-sky friendly lights are amber-yellow in color, instead of blue-white. Night-sky

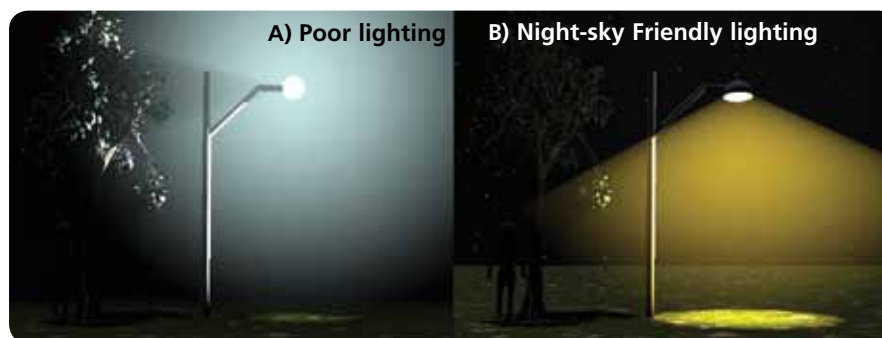
friendly lights are also shielded and ideally controlled by motion sensors so they only come on when they are needed. Poor lights not only contribute to global light pollution they are also less safe. Safety isn't about the amount of light, it's about designing lights that take away the "hard" shadows where criminals like to hide (see light comparison images below). Night-sky friendly lighting also requires less "base load" electricity, which usually comes from coal-fired power stations, the most polluting sources of electricity.

Being far from major cities, Bryce is a phenomenal place for stargazing. With a limiting magnitude rating of 7.4, our sky is up to six times darker than most astronomical research locations. Indeed, our 11" diameter telescopes function just as well as 24" telescopes at more famous astronomy locales like Kitt Peak, Arizona and Mt. Palomar, California. Through our scopes you will not only see the rings of Saturn, but also seven of its moons! We can show you dozens of nearby galaxies including the ongoing collision of the famous Whirlpool Galaxies.

On a moonless night at Bryce, you'll notice that light from Venus causes you to cast a shadow; and even without a telescope you can see 7500 stars. But, if we were to add just one un-shielded streetlight, that number would plunge to 2500 stars!

Before being veiled by the light pollution of the modern world, these wonders were once visible everywhere. Now over much of Earth they are hard to detect. Here at Bryce Canyon, we can still see the Milky Way (our galaxy's other great spiral arm) – stretching like a silvery rainbow from horizon to horizon. Yet, less than half of the residents of the northern hemisphere can see *any* of the Milky Way!

It is easy to feel insignificant underneath such vastness yet, ironically, it is within the individual's power to help preserve such a view. For example, close your blinds at night and replace porch lights with motion-sensor security lights. Become involved in local efforts to establish night-sky friendly lighting ordinances. Who knows? Perhaps your home town has the potential for Bryce Canyon-quality stargazing. In most places, all it takes to restore the heavens is overcoming the fear of darkness and unifying behind the responsible management of artificial light.



The Dark Rangers' Summer/Fall Night-Sky Program Schedule

8:30pm Start Times

May 7 - May 30

9:00pm Start Times

June 1 - August 10*

8:30pm Start Times

Aug. 13 - September 14

7:30pm Start Times

Sept. 17 - Oct 31

Bryce Canyon National Park celebrates the night sky *most* Tuesdays, Thursdays, and Saturdays throughout the summer and into fall. Each night begins with a choice of two 1-hour multimedia shows, each with different night-sky related topics. Check at the Visitor Center and choose the show and location that most interests you.

After the indoor presentations, it's out to the telescopes to enjoy the real sky! Remember to bring warm clothes. Even in August, temperatures may dip down as low as 40° F / 4° C!

Though the multimedia shows are never cancelled, stargazing is weather-dependent.

*No astronomy program will be offered Saturday July 27.



Full Moon Hike Schedule

May 23	July 22	Sept. 19
May 24	July 23	Sept. 20
June 22	Aug. 21	Oct. 17
June 23	Aug. 22	Oct. 18
June 24	Sept. 18	

Full Moon Hikes!

Our most popular activity is the Full Moon Hike – no artificial light allowed! Group size is limited to 30 people (ages 6 and up) per hike. To obtain a FREE ticket you must sign-up at the visitor center **EARLY** the morning of the hike.

NO advance reservations permitted!

Only people who can prove they have "lug" traction shoes/boots will be issued tickets. Come join us for one of these ultimate nocturnal adventures.



"Lug" Traction

DR. STORY MUSGRAVE RETURNS!

Join us for our 13th Annual Astronomy Festival (June 5 - 8, 2013) where Bryce Canyon National Park and the Salt Lake Astronomical Society welcome back NASA astronaut Dr. Story Musgrave on Friday June 7 for his second appearance as our festival's keynote speaker. Other special guests, along with Bryce Canyon's Dark Rangers, will present a full slate of programs on the other nights during the festival. Each night's programs are followed by stargazing with telescopes!

13th Annual Astronomy Festival June 5 – 8, 2013



Dr. Story Musgrave riding the Remote Manipulator System on the first Hubble Space Telescope servicing mission in 1993.

Bryce Canyon Natural History Association

PO Box 640051, Bryce, UT 84764-0051 888-362-2642 Fax 435-834-4606 www.brycecanyon.org

Established in 1961, Bryce Canyon Natural History Association is a non-profit organization dedicated to assisting Bryce Canyon National Park and Dixie National Forest in furthering their scientific, educational, historical, and interpretive activities. This is accomplished, by making educational publications and materials available for sale and/or free distribution, and supporting existing interpretive activities, like the Junior Ranger Program.

Every purchase from a Bryce Canyon Natural History Association bookstore helps support our mission.



Thank You to Our Donors & Partners

Bryce Canyon National Park is grateful to its generous donors and partners who improve park programs and services.

The **Bryce Canyon Natural History Association** provides the park with booklets and badges for the Junior Ranger program, printing costs for this **Hoodoo newspaper** and other publications. The Association also funds a full time Education Outreach Specialist for the park.

The **donation box** in the lobby of the visitor center has funded interpretive equipment that directly benefits the visiting public. A “state of the art” projector for the visitor center auditorium was purchased in 2007.

Each year since 2008, two Geo scientist-in-Park interns have been funded by the Geologic Society of America. These interns assist with research, present public geology programs throughout the summer, and provide training for park staff on the geology of the Colorado Plateau. Our Natural History Association helps to fund these two positions.

The **Lodge at Bryce Canyon** and **Ruby's Inn Resort** have implemented a Dollar Check-Off Program. Hotel guests have the option of donating a dollar to the park each night of their visit. These programs have funded seasonal employees for interpretation, the trail crew, and projects such as the recent addition of restrooms at Inspiration Point.

A hearty “thanks” to our generous donors and park partners. We couldn't do it without you!



Many exciting educational programs have been offered through the High Plateaus Institute including geology, astronomy, plants, wildlife, cultural history (ranching and cowboy poetry) and photography. The High Plateaus Institute (HPI) plays host to a variety of researchers each year, as well as providing a location for ranger-led programs for kids and families. For further information, contact the BCNHA Education Specialist at (435) 834-4784.

V.I.P.s (Volunteer-In-Parks)

Last year, more than 200 volunteers donated over 20,000 hours to Bryce Canyon National Park! If **you've** got time and talents to share, why not become a Volunteer-In-Park (V.I.P.)?

For more information, log on to: www.volunteer.gov/gov.

As a Natural History Association member, you can help us:

- Publish nearly a half million pieces of free literature for park visitors each year.
- Support educational outreach programs to schools in southern Utah and beyond.
- Continue National Park Service research projects that document the natural and human history of Bryce Canyon National Park.
- Support the Junior Ranger Program.
- Publish sales items like books, maps, posters, and audio-visual products that educate visitors about Bryce Canyon National Park and Dixie National Forest.
- Support the Bryce Canyon National Park's Interpretation & Resources divisions.
- Provide university scholarships to deserving students.

Purchase a \$35 Membership to receive these benefits:

- 15% discount on all books, maps, posters, and other products sold in our stores, and online at www.brycecanyon.org.
- Discounts to hundreds of other stores operated by more than 60 other nonprofit cooperating associations in national parks and other public lands in the United States (must show membership card to receive discount).
- Discount on most High Plateaus Institute courses. These courses offer in-depth outdoor education to visitors. Call 888-362-2642 or check our website for listings.

The “White” Bus



Bryce Canyon Lodge staff bidding farewell to Grand Circle travelers.

It doesn't really look white, does it? In the 1930's the White Motor Company of Cleveland, Ohio produced 500 Model 706 18-passenger touring buses, such as the one pictured, specifically for passenger travel in the national parks. Each park or concessionaire employed its own distinctive color scheme: Glacier National Park was known for its “Red Jammers” and Yellowstone for its vivid yellow-colored buses, some of which have been refurbished and are still in service in these parks. The Utah Parks Company White buses were painted in more subtle colors, dark

green and silver with black trim and fenders. No original buses of the Utah Parks Company's fleet are known to exist. The 706's dominated passenger travel along the route of the Grand Circle Tour from Cedar City through Zion National Park, North Rim of the Grand Canyon, Bryce Canyon National Park and Cedar Breaks National Monument.

Early motorized travel in the 1920's through the Grand Circle area was generally on dusty gravel roads, but by the 1930's roads were much improved and many were oiled or paved. Thus, passengers in the 706 buses travelled in relative comfort, and could roll back the canvas top of the bus to enjoy the fresh air and vertical scenery of southern Utah. Even though travel by private automobile eventually became the favored means of transportation for park visitors, even in 1938 up to 40 percent of visitors to Bryce Canyon came here as guests of the Utah Parks Company aboard these buses.

In 1996, the Bryce Canyon Natural History Association generously provided the funds to purchase this model 706 White bus from Yellowstone National Park and to restore it for use here at Bryce Canyon. Repairs were made to make the bus drivable and it is still used by the park for special events. However, much as any aging machinery, the park's White Bus is now in need of additional work. Restoration plans include retaining all of the original body, chassis and drive train, but the bus will be repainted to match the green, silver and black of the Utah Parks Company fleet. In time, visitors to Bryce Canyon will be able to at least see a fully-restored remnant of the Grand Circle fleet of 706's and acquire a sense of travel in an earlier era in the comfort of a “White” bus.

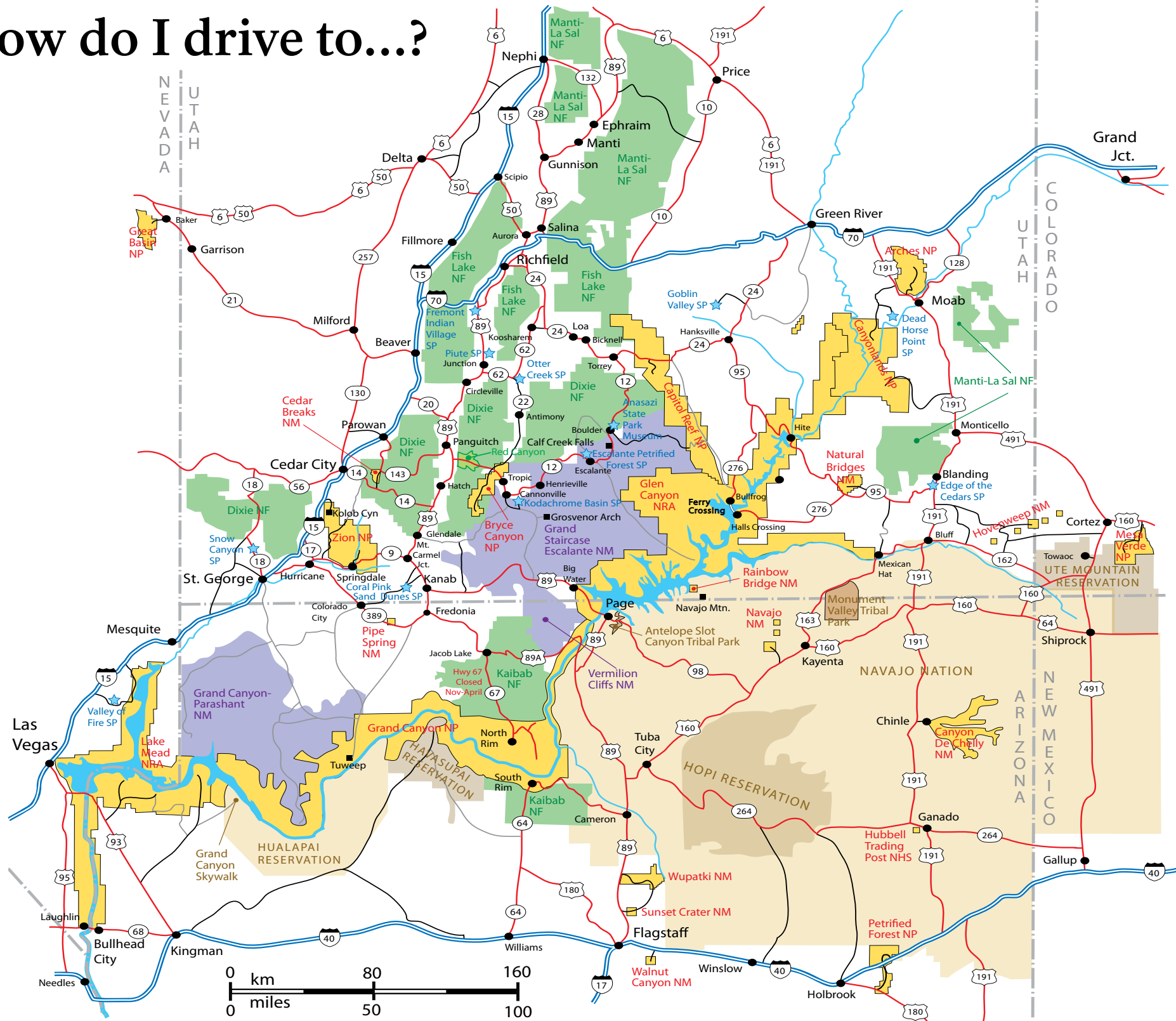


Bryce Canyon's White Model 706 touring bus.



Park visitors on a guided ranger hike at Bryce Canyon in the 1930s.

How do I drive to...?



Driving Distances

	Miles	Hours		Miles	Hours		Miles	Hours
Arches NP (via US 89 & I-70)	270	6	Cortez, CO (thru Page)	357	8	Kanab	80	1½
Arches NP (via UT-12)	249	6¾	Death Valley NP (Furnace Cr.)	392	7	Kodachrome Basin SP	25	¾
Boulder (Anasazi SP)	80	2	Escalante	50	1½	Lake Powell (Page, AZ)	150	3
Capitol Reef NP (via UT-12)	120	3	Grand Canyon NP (North Rim)	160	3½	Las Vegas	270	4½
Cedar Breaks NM	56	1½	Grand Canyon NP (South Rim)	300	5½	Monument Valley (via Page)	275	6½
Cedar City	80	1¾	Great Basin NP	199	5½	Monument Valley (via Cap Reef)	313	7½
						Panguitch	25	½
						Salt Lake City	260	4½
						Tropic	11	½
						Yosemite NP (via Tioga Road)	610	11½
						Yosemite NP	738	13
						Zion NP (East Entrance)	78	1½



Capitol Reef National Park
121 miles northeast via Utah 12 & 24

The Waterpocket Fold, a giant wrinkle in Earth's crust, features a jumble of colorful cliffs, massive domes, soaring spires, twisting canyons, and graceful arches. Ancient rock art and historic orchards tell of the park's cultural history. Orchards are open June - October for "self-serve picking" of cherries, pears, apricots, peaches, and apples. Visitor Center: 435-425-3791
www.nps.gov/care
12 The Hoodoo



Cedar Breaks National Monument
83 miles west via Utah 12, US 89 & Utah 14

At 10,350 feet (3155 m), Cedar Breaks is the highest Park Service unit and features a spectacular amphitheater of walls, fins, spires, and columns eroded out of colorful Claron limestone. Forests of pine, spruce, fir, and aspen are separated by alpine meadows ablaze with brilliant summer wildflowers. Temperatures are usually cool. Headquarters: 435-586-9451
www.nps.gov/cebr



Grand Staircase-Escalante Nat'l Monument
South and east via Utah 12 & US 89

This 1.9 million acre area features diverse and ruggedly beautiful landscapes. Utah 12 and US 89 skirt the fringes of the monument and offer numerous scenic pull-outs. All of the roads in the monument's interior are unpaved, and many require 4-wheel drive. Escalante Visitor Center: 435-826-5499
Cannonville Visitor Center: 435-679-8981
Kanab Headquarters: 435-644-4600
www.ut.blm.gov/monument



Red Canyon / National Scenic Byway 12
124-mile route between US 89 & Utah 24

National Scenic Byway 12 stretches 124 miles from Red Canyon to Capitol Reef National Park and provides breathtaking views across the Grand Staircase and into the Escalante Canyons. The Federal Highway Administration designated this route an "All-American Road," making it a "destination unto itself." Ask for a Byway 12 Route Guide at any visitor center along the way.